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10/633,207	08/01/2003	Robert J. Petcavich	937-1535	3285

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EXAMINER

CHAWLA, JYOTI

ART UNIT	PAPER NUMBER
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1761

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/633,207

Applicant(s)

PETCAVICH, ROBERT J.

Examiner

Jyoti Chawla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's submission filed on January 23, 2007 has been entered. Claims 1-5 have been amended, claims 7-11 have been cancelled owing to the non-elected invention, and claim 12 has been added. Claims 1-6 and 12 are pending and examined in the application.

Specification

The amendment filed January 23, 2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The additional material, which is not supported by the original disclosure, is as follows:

1. Paragraph [0010] where the applicant has replaced one surfactant, i.e., Triton X, from the disclosure and replaced it with an entire generic class of surfactants by stating "from about 0.0001 to 10 percent surfactant, preferably ~~Triton X~~ an octylphenol ethoxylate such as TritonTM X octylphenol ethoxylate surfactants commercially available from The Dow Chemical Company, Optional additional ingredients".
2. Paragraph [0016] and Paragraph [0027] also have similar changes made to the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

Applicant's Remarks on page 7 state "the specification has been revised so as to clarify the chemical names of the surfactants that were originally listed by tradenames. More specifically, Triton M X and Tergitol M surfactants are well known nonionic octylphenol and nonylphenol ethoxylate surfactants, respectively.¹ Similarly, Polysorbates are well known non-ionic surfactants.² Thus, no "new matter" within the purview of 35 USC §132 has been introduced into the specification by way of the amendment instructions above." The argument that no new matter has been introduced is not convincing as the applicant had a few examples of general surfactants in the original disclosure with no disclosure stating whether the examples of surfactants were ionic or anionic or cationic or non-ionic in nature, whereas the amendments to specification submitted January 23,

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2007, include addition of a category of non-ionic surfactants, which is one class of surfactants. The non-ionic surfactants were not part of the original disclosure as discussed above. Therefore, amendments to the specification comprising non-ionic surfactant are regarded as new matter.

The disclosure is objected to because of the following informalities:

Specification paragraph 0029, line 4 states "Preparation and application of the coating without an antifoaming agent frequently *result* in foaming and a consequent delay" where the word "result" needs to be changed to results. Further line 11 of the same paragraph has a typographical error where "Michegan" needs to be replaced by Michigan.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 has been amended to include the term "nonionic" to the surfactant and the original disclosure paragraphs [0010], [0016], [0027], [0032], and [0033] disclose of a surfactant, however there is no support that the surfactant is a non-ionic surfactant as discussed above.

Claim 3 recites, "nonionic surfactant is at least one selected from the group consisting of octylphenol ethoxylates, nonylphenol ethoxylates and polysorbates", where octylphenol ethoxylates and nonylphenol ethoxylates have not been disclosed in the original

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disclosure. Similarly claim 12 also includes the recitation of non-ionic surfactant and octylphenol ethoxylates, nonylphenol ethoxylates, which are not part of the original disclosure.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "an exterior surface" is indefinite as it is unclear as to what surface would qualify as "an exterior surface", e.g., would the end of the stem by which a fruit is attached to the plant qualify as "an exterior surface" or whether the entire external surface the fruit or vegetable would be considered "an external surface". The term "an external surface" for the application of the preservative composition is unclear for the purposes of prior art comparison.

The term "effective amount" as recited in claim 12, is a relative term, which renders the claim indefinite. The term "effective amount" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further the term "effective amount" may mean different things to different people, thus the term renders the claim indefinite for prior art comparison. Clarification and/ or correction is required.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejection of claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Scott et al (US 2872325) has been withdrawn in light of applicant's amendments.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(A) Claims 1-3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al (US 2872325), in view of the combination of Nisperos Carriedo et al (US 5376391).

Scott et al., hereinafter Scott, teaches a process of coating perishable foods by an emulsion of polymerized vinylidene chloride, i.e., polyvinylidene chloride (Column 2, lines 20-30), by dispersing in an aqueous phase with 1-5% emulsifier (surfactant) and an additional surface-active agent (Column 3, lines 36-58), which falls within the applicant's recited range of 0.0005% to 10%. Scott teaches solids content of 10-25% (Column 3, lines 2-5), and polyvinylidene chloride content of 88-91% of the total weight of the monomers present in the composition (Column 2, line 25). Thus Scott teaches polyvinylidene chloride content of 8.8 to 22.75% of the coating composition, which falls in applicant's recited range for claim 1 and 12. Scott however does not specifically teach a non-ionic surfactant such as Polysorbate as recited by the applicant in claims 1, 3 and 12. Thus one of ordinary skill in the art at the time of the invention would have been motivated to look to the art for non-ionic surfactants in food coatings. Nisperos Carriedo et al., hereinafter Nisperos, teaches food coating composition with Polysorbate as one of the surface-active agents or emulsifiers used in the composition (Column 3, line 64 to Column 4, line 5). Thus non-ionic surfactants or emulsifiers, such as, Polysorbate, were known in the art of food coating at the time of the invention. Therefore, one of ordinary skill at the time of the invention would have been motivated to modify the anionic surfactant taught by Scott to a non-ionic surfactant, such as, Polysorbate 80 (as taught by Nisperos) in order to have an emulsifier that is highly water soluble as the coating composition is an aqueous suspension. One of ordinary skill would have been further motivated to do so in order to have an emulsifier or stabilizer that is non-toxic and edible and thus is safe to be added to foods.

Regarding claim 2, Scott teaches Polyvinylidene chloride copolymer consists of 88-91% polyvinylidene chloride and 9-12% acrylonitrile (acrylic acid) as recited by the applicant (Column 2, lines 20-27).

Thus Scott in view of Nisperos teaches the invention as recited in claims 1-3 and 12.

(B) Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott, in view of Nisperos, as applied to claims 1-3 and 12 above, further in view of Yang et al (US 6165529).

Regarding claim 4, Scott teaches a coating composition for produce with antimicrobial agents (Column 3, lines 12-13). However, the reference does not teach the actual amount of these agents in the coating composition. Since Scott does not disclose a specific range for antimicrobial agent, one of ordinary skill in the art would have been motivated to look to the art to find a similar product with antimicrobial agent. Yang et al, hereinafter Yang, teaches a coating composition for post harvest produce and composition taught by Yang contains 0.05-5% antimicrobial agents, such as, triclosan or methylparaben (Column 3, lines 31-33), which encompasses the range taught by applicant in claim 4. It would have been obvious to one with ordinary skill in the art at the time of the invention to modify coating composition taught by Scott and add the amount of antimicrobial agent as taught by Yang in order to have sufficient amount of antimicrobial agent in the coating composition to help reduce the microbial deterioration of food. One would have been further motivated to vary the amount of antimicrobial agent in the coating composition as taught by Yang in order to make coating compositions that contain antimicrobial compounds in a concentration that will be suitable for the type of produce being coated, length of storage of produce (transportation/ ripening) and desired storage conditions (humidity, temperature etc.).

Regarding claim 6, Scott and Nisperos are silent as to the addition of antifoam in the coating composition for produce. Unwanted foaming was a known problem in making emulsions and it could be solved by the addition of antifoaming agents. Yang teaches

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addition of an antifoaming agent, such as polydimethylsiloxane, to the coating composition in a range 0.001 to 0.005% (Column 3, lines 34-36), which falls within the recited range of the applicant. One of ordinary skill in the art at the time of the invention would have been motivated to modify Scott based on the teachings from Yang, and employ an antifoaming agent in the coating emulsion in order to avoid unwanted foam. One would have been further motivated to use an inert chemical antifoams based on silicone, such as polydimethylsiloxane, because silicone based chemical antifoams are quick acting due to lower surface tension, they are non-reactive to other process media and can be added to most compositions, and also remain effective for longer time.

(C) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott in view of Nisperos as applied to claims 1-3 and 12 above, further in view of Bice et al (US 3674510).

Regarding claim 5, Scott teaches a coating composition for produce with antifungal agents (Column 3, lines 12-13). However, the reference does not teach the actual amount of these agents in the coating composition. Thus one of ordinary skill in the art at the time of the invention would have been motivated to look to the art to find a coating product used to retard fungal growth in post-harvest produce. Bice et al, hereinafter Bice, teaches a coating composition for produce containing an antifungal agent (Abstract and Column 3, lines 48-55). The Bice reference teaches that 0.4-2 parts per million, i.e., 400-2000 parts per billion of an antifungal compound 2-(4-thiazolyl) benzimidazole (hereinafter TBZ), based on the weight of fruit (Abstract, Column 3, lines 73-75 and Column 4, specially lines 40-45), which falls within the recited range of the applicant for claim 5. Thus antifungal agents in the recited range of the applicant were known to be added to the food coating compositions (Bice). Therefore, one of ordinary skill in the art at the time of the invention would have been motivated to modify Scott and add the antifungal compound in the coating complex in the amount taught by Bice in order to make an effective antifungal coating composition. One would also have a reasonable expectation of success of keeping the coated food in good condition for a

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desired storage time, temperatures, and other available storage/ transportation conditions.

Response to Arguments

Applicant's arguments filed January 23, 2007, with respect to claims 1-6 and new claim 12 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jyoti Chawla
Examiner
Art Unit 1761



KEITH HENDRICKS
PRIMARY EXAMINER